UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604

DATE: FEB 08 2013

SUBJECT: Plant Inspection- General Cable, Marion, IN

FROM: Kushal Som, Environmental Engineer
Air Enforcement and Compliance Assurance Section
(IL/IN)

THRU: Nathan Frank, Chief
Air Enforcement and Compliance Assurance Section
(IL/IN)

TO: File

Date of Inspection: June 20, 2012

Attendees:

David Mooney, Environmental, Health & Safety Manager, General Cable

Kushal Som, Environmental Engineer, U.S. EPA

Sarah Lachenman, Environmental Scientist, IDEM

Purpose of Inspection: The U.S. EPA conducted an inspection to ensure that the facility complies with the Clean Air Act.

Company Description and Background

Plant Location: 440 East 8th Street
Marion, Indiana 47905

Phone Number: 765-664-2321 ext. 68118

Primary Contact: **David Mooney**, Environmental, Health & Safety Manager, General Cable

Plant Description:

General Cable manufactures durable cable for various industrial applications, which include: mining (making up approximately 40% of the total product), wind turbines and solar.

Wiremill

Conductive metals, such as copper, are received via the "Rod Dock" on the southeast side of the plant. The metal is melted, and extruded into wire, which is drawn (coiled) onto a reel.

Insulation

The reels of wire are then stranded, braided and/or taped in various process machines. The tape line continuously tapes an insulating cover onto certain wires. The standing machines then weave the metal wires into a larger cable. Braiding machines weave fabric to provide a protective covering over the cable. A reprint line washes the cable, with a Xylene-based chemical, to remove printed material.

Continuous Vulcanization (CV)

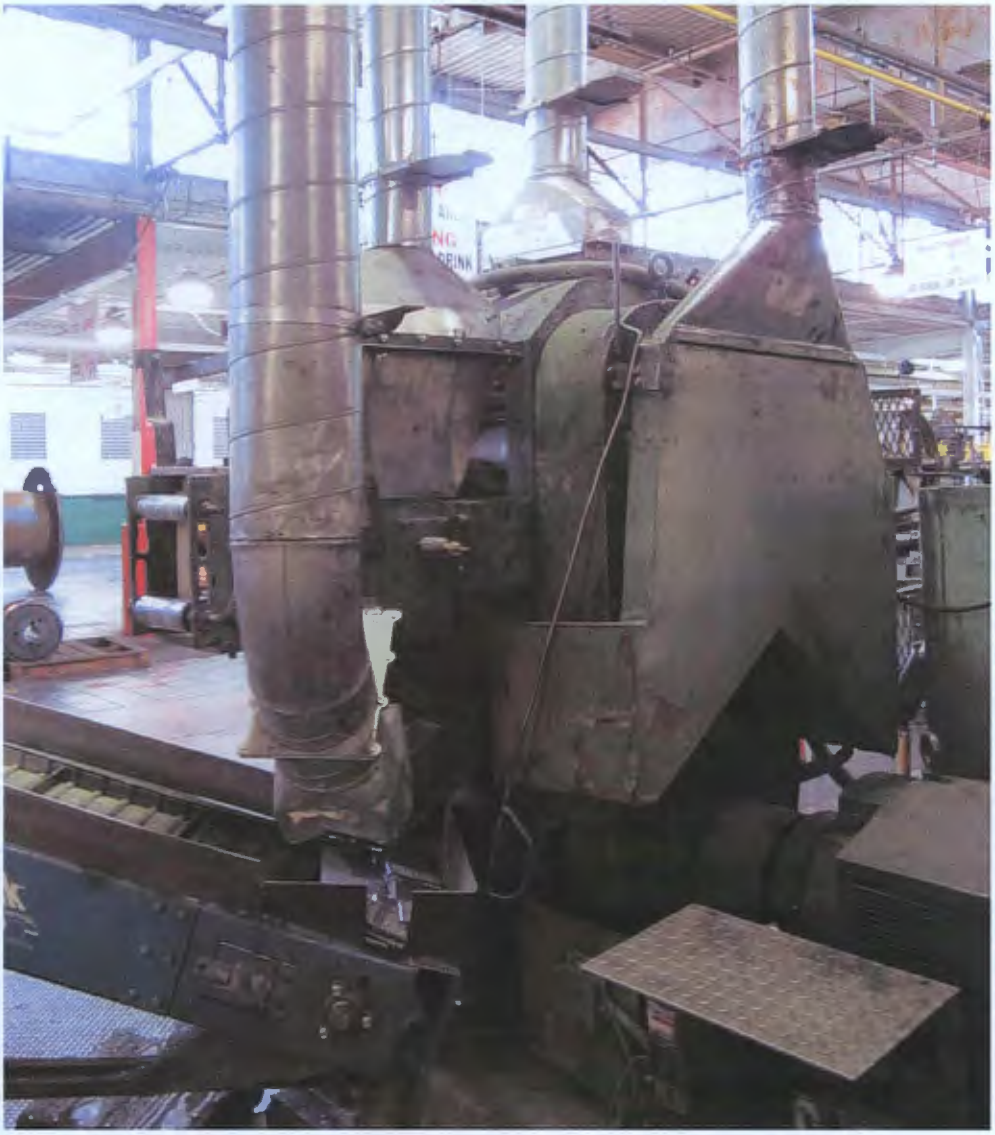
A rubber covering is extruded onto cables not processed through the three lead lines. The facility operates five CV lines: CV-1 through CV-5. CV-3 was installed in 1997, the rest were installed prior to 1978. Emissions are vented to the atmosphere through a release valve at the end of a cycle. The facility utilizes a 1994 study to generate emission factors that estimate VOC emissions from the CV lines.

Lead Lines

The facility currently utilizes three lead lines (the South, Middle and the Electrical Submersible Pump (ESP) lines). The lead is used to cure the cable in order to simultaneously provide flexibility and strength in severe industrial applications, such as in underground mines. The three lead lines route their lead emissions to a High Efficiency Particulate Air system, which were installed in 2000. It appeared that there may be a potential for some lead emissions to escape the capture devices (hoods). A coating/adhesive is utilized at the lead

lines, called Chemlok 238, which emits a VOC content of 6.18 lb VOC/gallon (according to the manufacturer's Material Safety Data Sheet (MSDS)).

Cables are extruded (a layer of lead is added) with lead metal at the three lead lines. For the Middle and South Lead Lines, a lead stripper is utilized to strip the lead coating off.



South and Middle Lead Line: Lead Stripper View from Southwest

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The pieces of lead are then re-melted and utilized back at the lead lines (lead briquettes are initially melted at the lead lines). Lead is not stripped from the cables produced from the ESP line (ESP line was built in 2012).

South & Middle Lead Lines: Lead Bins after Stripping

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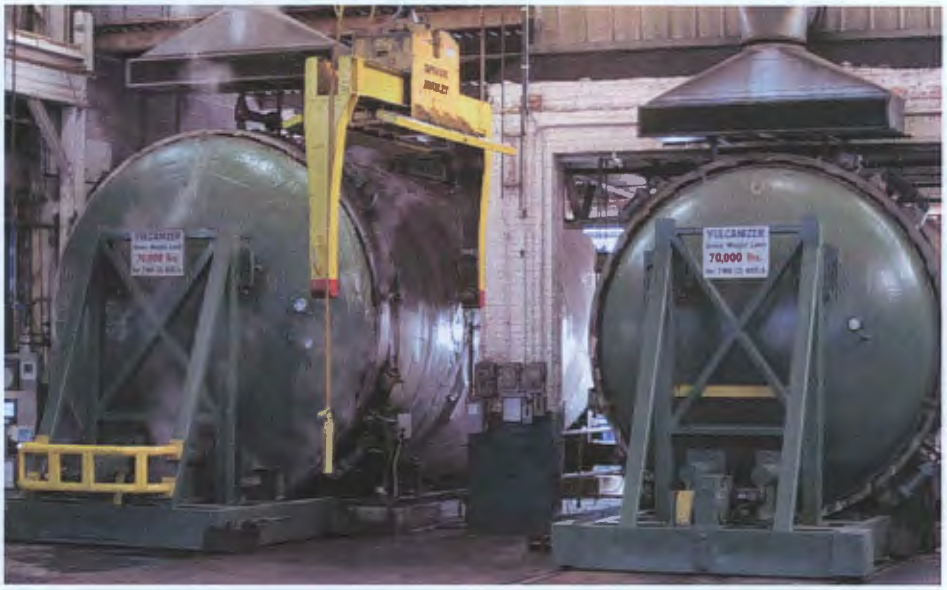
After stripping, a rubber coating is added and then spooled onto reels and loaded into one of two vulcanizers (autoclaves). The vulcanizers, located at the south end of the plant, utilize boiler steam, in a batch process, to vulcanize the rubber onto the cable. When opening the doors, emissions are collected via an overhead capture hood and vented outside.



South and Middle Lead Line Vulcanizers

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On-site Evaluations:

When passing by the Lead Lines (South and Middle), I observed a strong odor of VOC's. I did not detect any other odors or dust emissions during the inspection.

Closing Conference & Follow-up Investigation:

Mr. Mooney estimated that VOC emissions from the plant are at about 2,000 pounds per month (12 tons/year). Lead emissions ranged from 45 pounds of lead per month (0.27 tons/year).

The company was told that a Section 114 letter may be forthcoming to gather additional information. The Section 114 letter will likely include the following items:

- Data to find out if General Cable is subject to 326 IAC 8-2-9(c)of the Indiana State Implementation Plan, that limits a facility "engaged in the surface coating of miscellaneous metal parts and products" to 3.5 pounds of VOC per gallon, of coating excluding water. It appears that Chemlok 238, in

its MSDS, has a VOC content of 6.18 lb/gallon (water information not available).

- Capture hoods to their HEPA appeared to be limited in size. There were some discussions with IDEM regarding these controls in 2000. Why were these HEPA's installed? Did the company conduct some internal lead testing to convince them to install them? Did they conduct any dispersion modeling for lead? How did their capital appropriation requests justify its installation?